

## SPECIFICATION AMENDMENTS

*Page 1, line 1 (after the title)*

### FIELD OF THE INVENTION

*Page 1, lines 4-6:*

The invention relates to an apparatus for the actuation of at least one external element of a vehicle, in particular of a soft top element of a convertible vehicle, ~~of the type defined in more detail in the preamble of claim 1.~~

*Page 1, line 8:*

### BACKGROUND OF THE INVENTION

*Page 1, lines 15-19:*

In addition to the disadvantages typically inherent in hydraulic systems with respect to the temperature behavior and to the servicing effort as well as to the typically high construction space requirements, ~~in particular~~ the limited flexibility with respect to the design of the path of movement of the external element of the vehicle is disadvantageous on the use of a hydraulic drive for the pivoting of an external element of a vehicle.

*Page 1, lines 21-26:*

It is known ~~of convertible vehicles from practice that~~ to move a top or a top storage well cover of a convertible vehicle using is moved via an electrical drive. In this connection, linear drives are used which are designed as replacements for a hydraulic control for the corresponding use, with the linear motion generated by an electric motor being transmitted to the at least one pivotable external element of the vehicle via a suitable multi-joint mechanism. Such a drive ~~[[of]]~~ for a pivotable external element of a vehicle is thus ~~likewise~~ complex.

*Page 3, lines 4-11:*

In this known solution, a conventional transmission linkage is replaced by a complex mechanism having a plurality of hydraulic drives. In addition to the required construction effort and to the requirement of a separate hydraulic pump for each hinge point to be able to control different hinge points with independent volume flows and to a correspondingly high weight of the top, the speed of the top movement is restricted by the disadvantages of a hydraulic drive inherent in the system. These disadvantages [[, which]] include the high temperature dependency, the restrictions in the speed regulation due to the comparatively low stiffness of hydraulic systems and their dead times as well as a poor efficiency.

*Page 3, line 12:*

#### SUMMARY OF THE INVENTION

*Page 3, lines 13-17:*

It is therefore [[the]] an object of the present invention to provide an apparatus for the actuation of at least one pivotable external element of a vehicle, in particular of a top element of a convertible vehicle, of the type initially described in more detail which is improved with regard to a simple, flexibly designed and faster movement sequence in the pivoting of the at least one external element of a vehicle, to a simpler design and to a lower weight.

*Page 3, lines 19-20:*

This object is solved in accordance with some embodiments of the present invention ~~by the features contained in the characterizing portion of claim 1.~~

*Page 4, lines 13-18:*

A further ~~The possibility is furthermore of advantage is provided by some embodiments of the present in a design in accordance with the invention~~ [[of]] having a drive for a pivotable external element of a vehicle which allows ~~of making available~~ comfort functions. For example, [[such as]] an automatic unit may be adapted to the spatial environmental conditions, optionally determined via a suitable sensor system, and by means of which a top automatically closes or opens under predefined environmental

conditions or events such as rain.

*Page 4, lines 20-22:*

~~For instance, the~~ The top movement may ~~[[can]]~~ be ideally adapted to the available headroom, for example, by a distance sensor system and associated control modes stored in the central electrical control unit.

*Page 5, lines 1-6:*

The provision of an electric motor as the drive for the at least one pivot joint furthermore has the advantage that, using the motor current of the associated joint drive, a simple possibility of a jamming recognition is provided. The top may be stopped ~~, with a top stop~~ or a reversible top movement may be ~~being able to~~ initiated for a top with a low reaction time and thus a high jamming protection is possible ~~being able to be realized~~. Furthermore, a simplified location of the problem area is possible in this manner.

*Page 7, lines 18-23:*

The apparatus in accordance with the invention is also particularly advantageous when the external element of a vehicle to be pivoted is a cover element which can be raised from a closed position at least at one edge by pivoting by means of at least one drivable pivot joint and at least one associated drive around an oppositely disposed edge. Cover elements of this type may be ~~such as represent~~ a trunk lid or a top rear storage well cover or a rear cover of the vehicle combining these two functions.

*Page 8, line 24:*

#### BRIEF DESCRIPTION OF THE DRAWINGS

*Page 9, line 2:*

~~There are shown:~~

*Page 9, lines 4-6:*

Figure 1 is ~~Fig. 1~~ a simplified, three-dimensional view of a top for a convertible vehicle, shown alone, with the top being in the closed position;

*Page 9, lines 8-10:*

Figure 2 is ~~Fig. 2~~ a simplified plan view of an electric motor and two pivot joints of a roof element of the top in accordance with Fig. 1 in active connection therewith;

*Page 9, lines 12-13:*

Figure 3 is ~~Fig. 3~~ a simplified, partially sectioned side view of a pivot joint of Fig. 1 and Fig. 2;

*Page 9, lines 15-16:*

Figure 4 is ~~Fig. 4~~ a further partially sectioned side view of the pivot joint of Fig. 3;

*Page 9, lines 18-19:*

Figure 5 is ~~Fig. 5~~ a section through the pivot joint of Fig. 3 and Fig. 4 along a line A-A in Fig. 3;

*Page 9, lines 21-22:*

Figure 6 is ~~Fig. 6~~ a section through the pivot joint of Fig. 3 and Fig. 4 along a line B-B in Fig. 4;

*Page 9, lines 24-25:*

Figure 7 is ~~Fig. 7~~ a simplified three-dimensional representation of a connection of a clip of the top of Fig. 1, shown alone;

*Page 10, lines 1-3:*

Figures 8.1 to 8.11 are ~~Figs. 8.1 to 8.11 in each case a schematic positional sketches sketch~~ of the roof elements of the top of Fig. 1 during a first movement sequence for the top opening;

*Page 10, lines 5-7:*

Figures 9.1 to 9.13 are ~~Figs. 9.1 to 9.13 in each case a schematic positional sketches sketch~~ of

the roof elements of the top of Fig. 1 during a second movement sequence for the top opening;

*Page 10, lines 9-11:*

Figures 10.1 to 10.12 are ~~Figs. 10.1 to 10.12 in each case~~ a schematic positional sketches ~~sketch~~ of the roof elements of the top of Fig. 1 during a third movement sequence for the top opening;

*Page 10, lines 13-15:*

Figures 11.1 to 11.5 are ~~Figs. 11.1 to 11.5 in each case~~ a schematic positional sketches ~~sketch~~ of the roof elements of the top of Fig. 1 during a fourth movement sequence for the top opening; and

*Page 10, lines 17-20:*

Figures 12.1 to 11.3 are ~~Figs. 12.1 to 12.3 in each case~~ a schematic positional sketches ~~sketch~~ of a top storage well cover during a movement sequence between an open position of the top storage well cover and a locked closed position.

*Page 10, line 21:*

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

*Page 10, lines 22-25:*

In the embodiments of an apparatus in accordance with the invention described in the following, the ~~[[said]]~~ apparatus actuates ~~serves the actuation of~~ a pivotable external element of a vehicle, such as ~~which is here made in each case as~~ a top element of a top element of a top 1 of a convertible vehicle 2.

*Page 11, lines 1-4:*

~~In Fig. 1, the top 1 for the~~ The convertible vehicle 2 ~~which~~ is designated overall as 2 and is shown in more detail in Figs. 11.1 to 11.5. In Fig. 1, the top 1 is shown with ~~[[and has]]~~ three foldable roof elements 6, 7, 8 which are bounded by external roof frame section pairs 3, 4, 5 which are oppositely disposed with respect to a longitudinal axis of the vehicle.

*Page 11, line 26 to page 12, line 4:*

Furthermore, a clamp 15 of the top 2 is pivotably connected to the vehicle body in the region of the main bearing 9 via pairs of pivot joints 10A, 10B, 10C, 10D, 10E and 10F. A [[and a]] top storage well cover 16 [[, which]] is arranged at the rear end of the top 2 and covers a stowage space for the top 2 in its opened state. The top storage well cover 16 [[, ]]is pivotably connected to the vehicle body via two pivot joints 17A, 17B attached to its end at the rear side. The clamp 15 and the cover 16 [[,]] both represent ~~components representing~~ pivotable external elements of the vehicle.

*Page 12, lines 24-27:*

The electric motors 18 to 22 shown are each made as DC motors and are arranged centrally with respect to the longitudinal axis of the vehicle. However, ~~;-however,~~ in an aspect differing from this, a decentralized arrangement of an electric motor and its connection with only one pivot axle is also possible.

*Page 13, lines 12-20:*

As shown in ~~can in particular be seen from~~ Fig. 4 and Fig. 5, the flexible shaft 23 is rotatably connected to a screw 25 of the transmission device 24 supported at the lever 4 of the middle roof element 7. The screw 25 is in engagement with a first gear 26 which is made of plastic for noise reasons in the present case and which is made in staged manner with a first gear stage 26A which is in engagement with the screw 25 and a second gear stage 26B of a smaller diameter. The second gear stage 26B is in engagement with a second gear 27 or a first gear stage 27A of the same whose diameter is larger than the first gear stage 26A of the first gear 26. Both the first gear 26 and the second gear 27 are supported at both ends in the bearing shell 31.

*Page 16, lines 5-8:*

Fig. 10.1 to Fig. 10.12 show a top opening movement with an even lower trajectory such as can be selected with a free rear region and which is optionally also possible during the journey of the vehicle since a very low area is exposed to the wind and so a very low drag can be realized with this opening movement.

*Page 18, lines 19-24:*

Figs. The Fig. 12.1 to 12.3 show an alternative drive for the top storage cover 16 in an elementary illustration which can here at the same time be designed as a gate cover. The top storage well cover 16 is thus a cover element which can be raised from a closed position at least at one edge, such as at the edge 16A at the front side of a vehicle, by pivoting by means of drivable pivot joints 42, 43 and by means of an associated drive 22 around an oppositely disposed edge, here the rear edge 16B.

*Page 19, lines 20-27:*

In particular with embodiment variants in which a further rear cover or trunk cover adjoins the top storage well cover 16 at the rear side, it is advantageous to design the hinged connection of the top storage well cover 16 in the region of its pivot axle A5 by means of a space-saving so-called swan-neck bearing which is curved between a hinged point and the fastening to the top storage well cover in the longitudinal direction of the vehicle such that it can move out of the way from an adjacent edge of a rear cover at the front side of the vehicle [[on a]] by pivoting. In this connection, the swan-neck bearing can also be arranged in a water passage.

*Page 20, lines 2-7:*

When the top storage well cover 16 is moved [[at]] from an open position as shown in Fig. 12.1 into a closed position as shown in Fig. 12.2, the top storage well cover 16 is lowered by a control of the pivot joint 42 fixedly supported on the vehicle and of the pivot joint 43 connecting the levers 47, 48 of the linkage 46 from an approximately vertical position into an approximately horizontal position, with a latching being able to be made available by a suitable locking element in the closed position shown in Fig. 12.2.

*Page 21, lines 5-6:*

For the emergency unlatching, the linkage 46, as shown by dashed lines ~~chain-dotting~~ in Fig. 12.3, can be pivoted rearwardly to release the top storage well cover 16 for a manual opening.